



Montgomery County Planning Board Mandatory Referral Presentation Smart Growth Initiative Program - EMOC

Montgomery County, Maryland
Office of Special Projects - DGS
Baker and Associates
May 27, 2010

Current EMOC

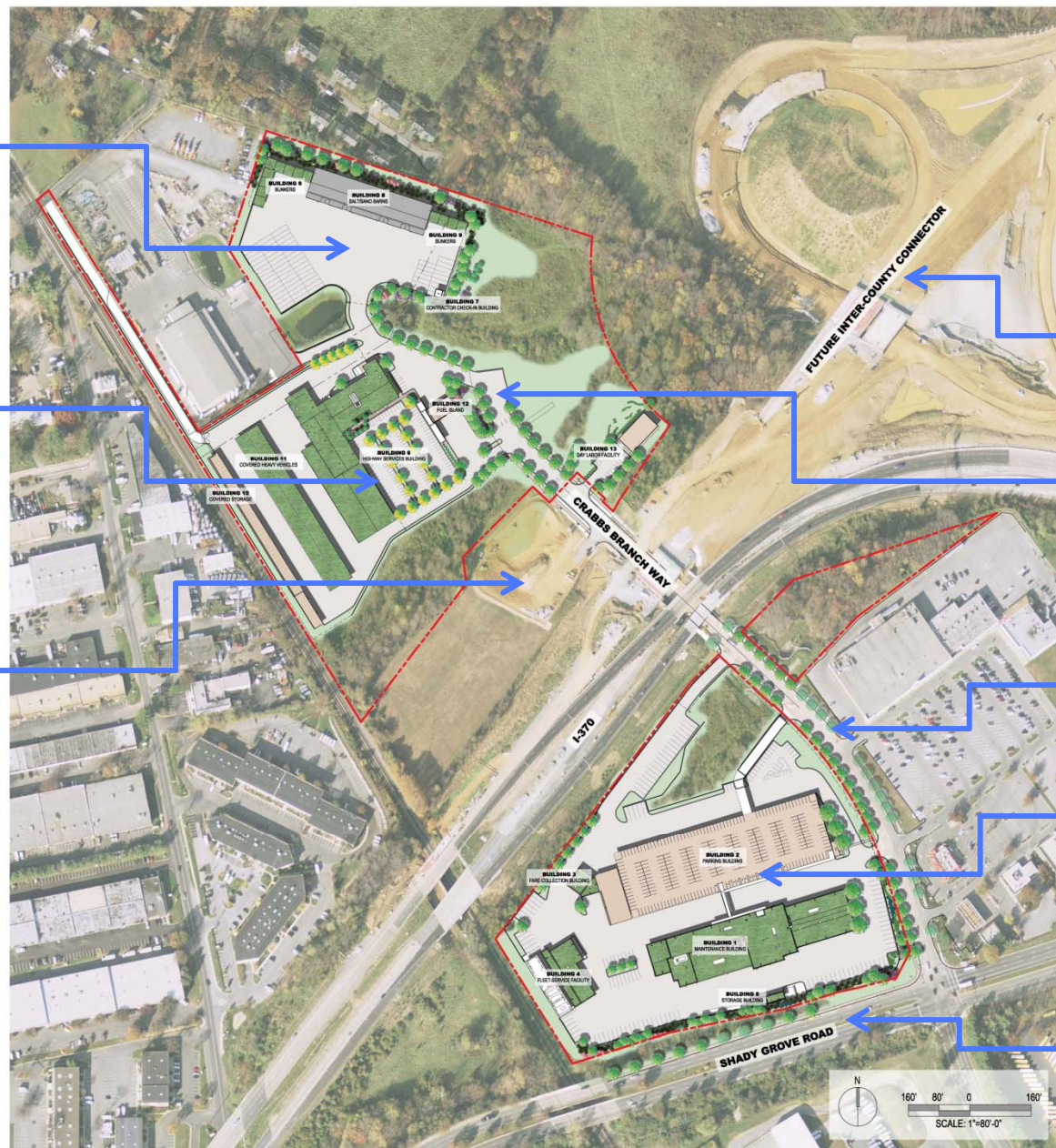


Overall Site

Salt Barn Operation
(Roberts Oxygen)
5.04 ac.

Highway Services
(Casey 6)
19.05 ac.

SHA Depot



Sustainable Strategies

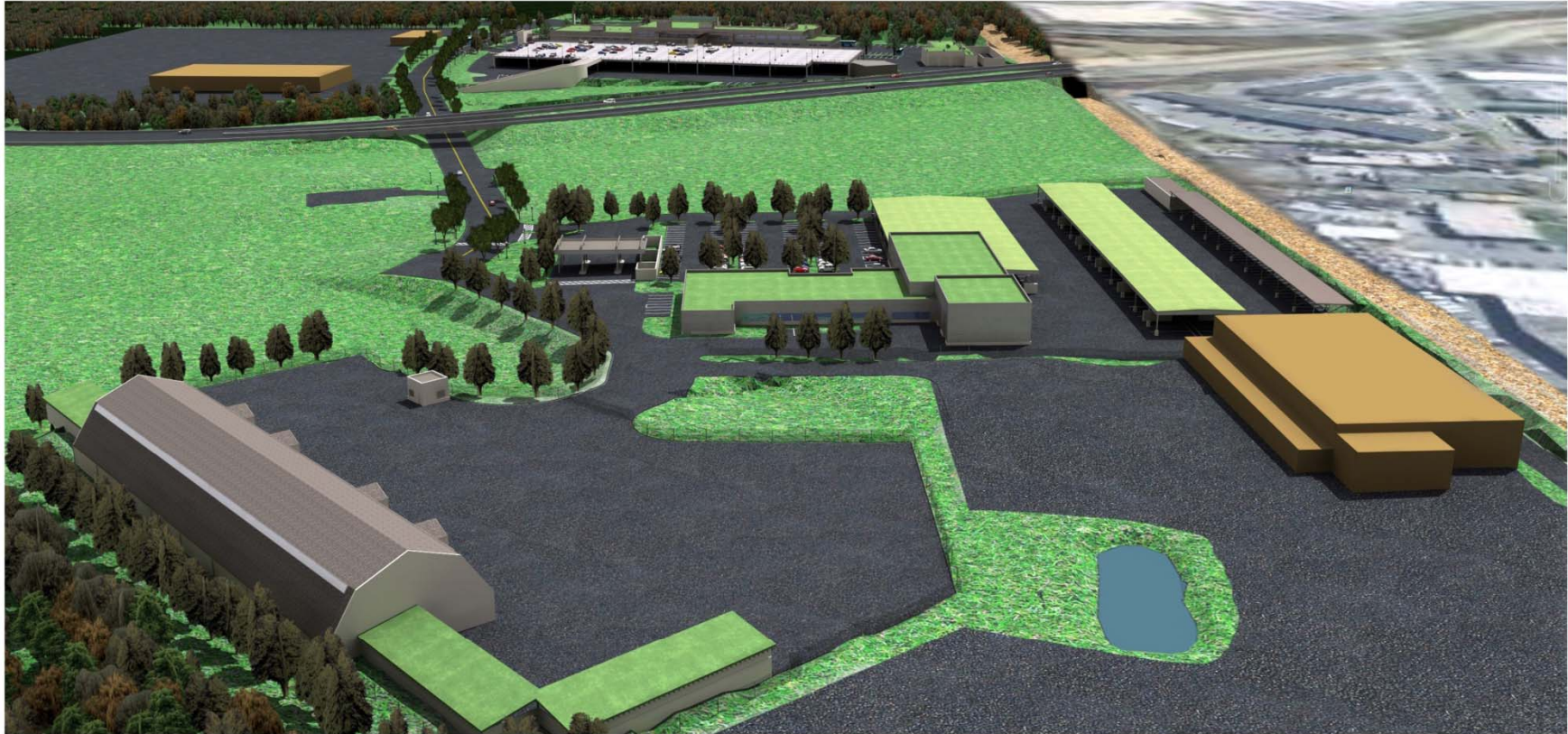
Shady Grove Equipment Maintenance and Operation Center- EMOC

- Project is planned to achieve LEED GOLD certification
- New facilities take less land than the existing facility
- New program and needs are larger than the existing program, but the new facilities design on less foot print than existing facilities by providing the first multi story depot for the county.
- Project has been coordinated with the community for Sound, view, traffic and other community related concerns
- Bus circulation allows on-site bus queuing to minimize impact to Crabbs Branch Way
- Active and passive noise reduction measures have already been proactively designed into the proposed project, including equipment location, operation, enclosures and building heights/orientation

Aerial View looking North-West



Aerial View looking South-East



LEED Credits

Sustainable Sites

- Secure bicycle spaces for 5% of building occupants (18 bicycles)
- Showering facilities for 5% of building occupants 16 showers exceed LEED requirement
- 23 spaces reserved for carpool/vanpool
- 100% of the average annual rainfall is treated by storm filters
- 187,000 SF (4.3 acres) vegetative roofs - 75% of roof surface
- 28,000 SF (0.6 acres) roof membrane meeting 78 Solar Reflectance Index
- Exterior lighting fully comply with LEED "Light Pollution Reduction requirements
- Interior lighting in direct line of sight are automated to reduce 50% of their power from 11 pm to 5am



Water Efficiency

- New EMOC automated treatment system will save 80% of water used in the wash process and discharge
- Rainwater will be collected at the roof and will be used for the following functions: bus wash, chassis wash, toilets and urinals, and hose bibbs.
- Low flow urinals (0.125 gallons per flush), showers (1.5 gallons per minute), sinks (0.5 gpm) and toilets (1.28 gpf) are included
- A water savings of between 30% and 40% of baseline is anticipated.

Energy & Atmosphere

- The building design includes efficient building characteristics including improved insulation characteristics, exterior lighting is LED with solar powered LED on the parking structure, efficient HVAC system design, ventilation energy recovery in large maintenance bay areas, a 31.2% energy cost savings as compares to the ASHRAE average
- The equipment and refrigerants for the EMOC facility have been selected to minimize or eliminate the emission of compounds that contribute to ozone depletion and global warming
- Energy monitoring devices
- Renewable Energy Credits resulting in a cleaner and more sustainable environment.
- The elevator's EcoDisc efficiency is three times that of a hydraulic power unit and uses 60-70% less energy with no oil and no hole drilling
- Daylighting into vehicle maintenance bays through glazed panels and transoms
- Solar lighting is provided on the parking roof

Materials & Resources

- At least 75 percent of the construction and land-clearing waste will be salvaged or recycled
- The project will reuse maintenance equipment, CNG components, and chain link fence fabric from the existing EMOC facility
- A minimum of 50% of wood-based materials and products will be certified.

Indoor Environmental Quality

- CO2 monitoring of occupied spaces
- Air quality during construction will be maintained under a Construction IAQ Management Plan
- Low VOC content adhesives and sealants, paint, and carpet products
- Wood products to contain no added chemical and pollutant source
- MCG is dedicated to implementing and maintaining a green cleaning policy as it relates to purchasing cleaning products, janitorial paper products, and hand soaps as well as the use of cleaning equipment, storing hazardous materials, training of the Cleaning Contractor, and being aware of sensitive building occupants

Partial Site Development Alternatives



HIGHWAY SERVICES AND SALT BARN OPERATIONS

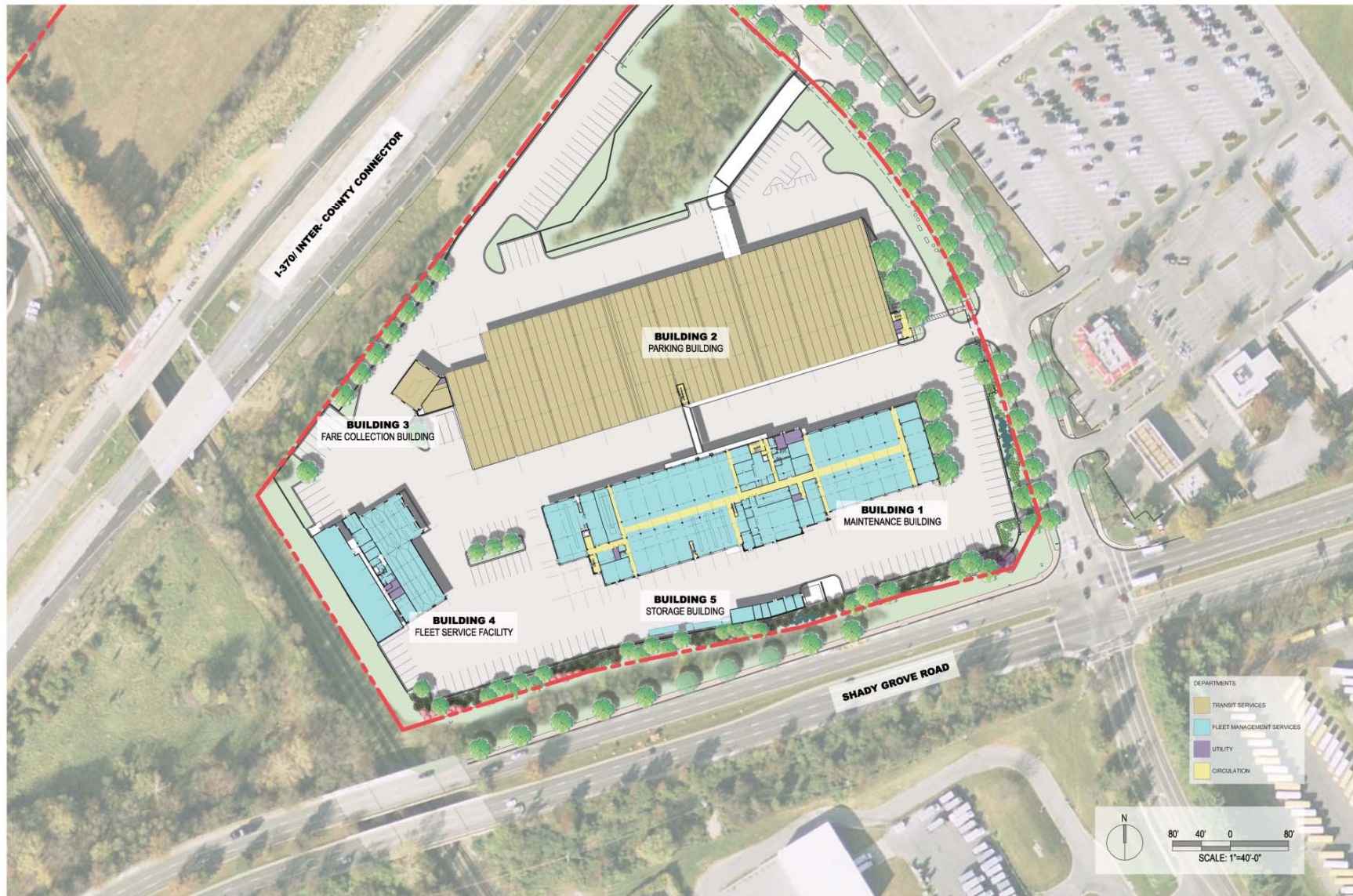


FLEET AND TRANSIT SERVICES

Stream Valley Buffer



Transit and Fleet Services



Shady Grove Road View of Transit and Fleet Services



Shady Grove Road / Crabbs Branch Way



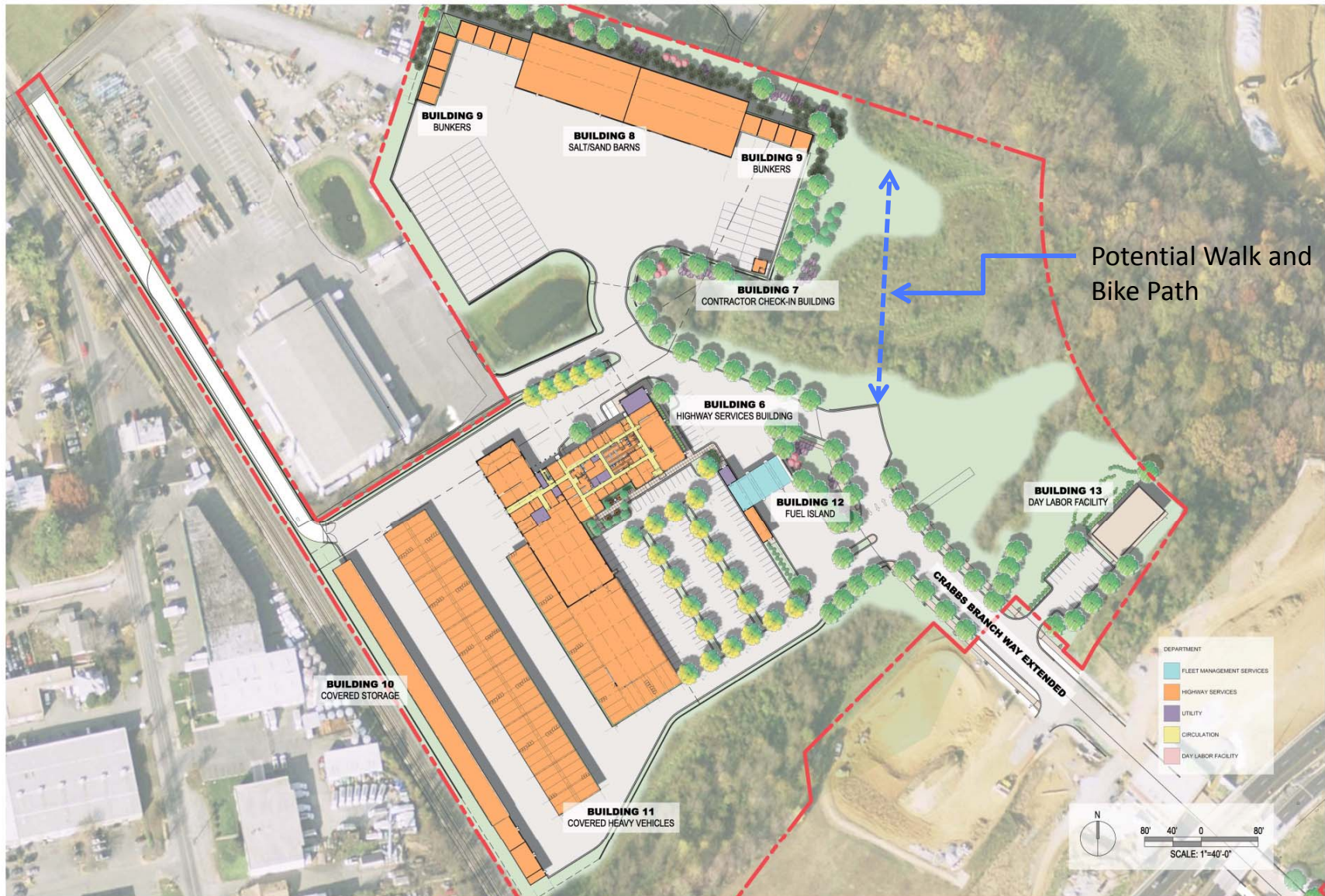
Shady Grove Road View of Maintenance Building



Crabbs Branch Way View of Parking Structure



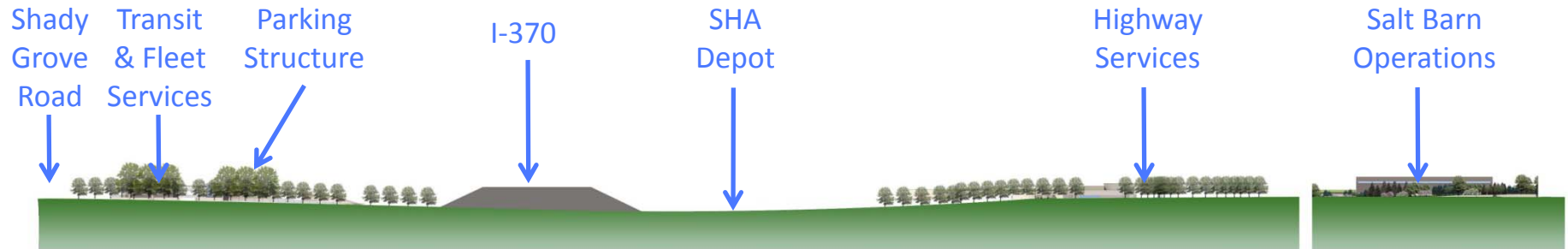
Highway Services and Salt Barn Operations



Crabbs Branch Way View of Highway Services



Crabbs Branch Elevations



East Elevation – Crabbs Branch Way

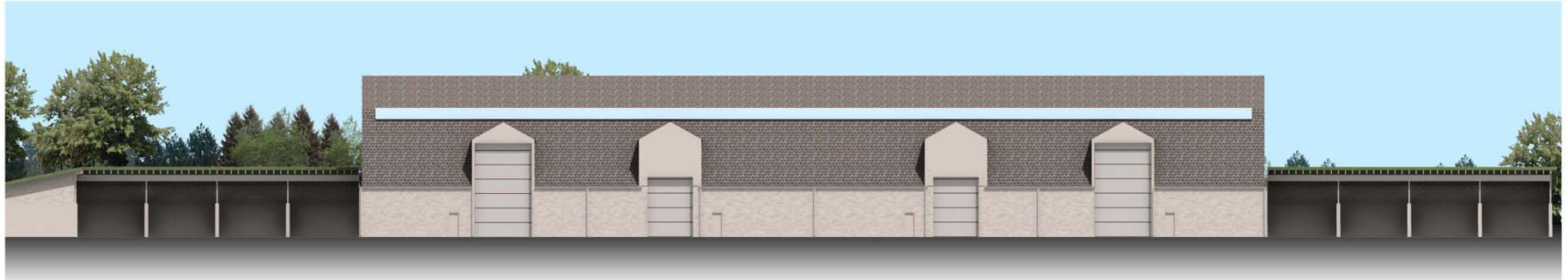


East Elevation – Fleet and Transit Services

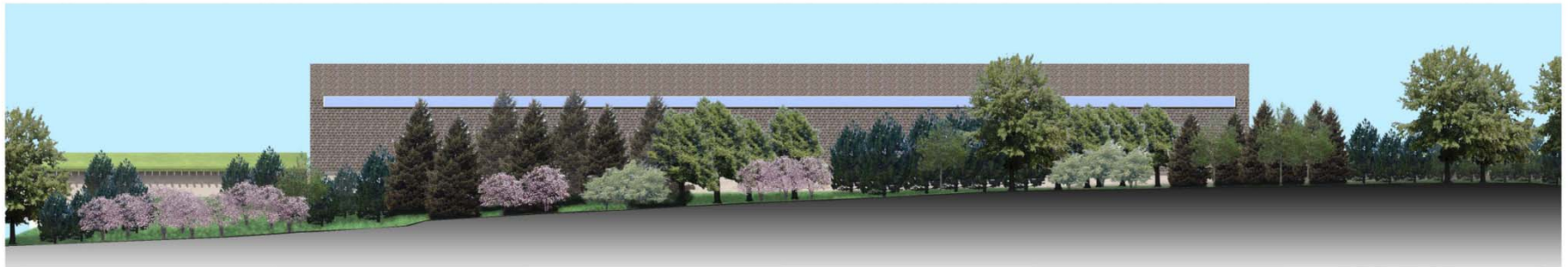


East Elevation – Highway Services

Salt Barns and Bunkers Elevations



[Salt Barn Yard Elevation](#)



[Green Buffer – Salt Barn Community Elevation](#)